

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IFW

Applicant: Yuegang Zhang et al.

Title: THERMAL INTERFACE APPARATUS, SYSTEMS, AND METHODS

Docket No.: 884.885US1

Filed: June 30, 2003

Examiner: Unknown

Serial No.: 10/612,711

Due Date: N/A

Group Art Unit: 3743



Mail Stop Amendment

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

We are transmitting herewith the following attached items (as indicated with an "X"):

☒ A return postcard.

☒ A Communication Concerning Related Applications (2 pgs.).

☒ An Information Disclosure Statement (2 pgs.), Form 1449 (1 pg.), and copies of 21 cited documents.

If not provided for in a separate paper filed herewith, Please consider this a **PETITION FOR EXTENSION OF TIME** for sufficient number of months to enter these papers and please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

Customer Number 21186

By Charles E. Steffey
Atty: Charles E. Steffey
Reg. No. 25,179

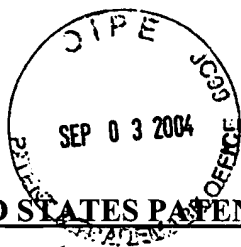
CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 1 day of September, 2004.

KACIA LEE
Name

Kacia Lee
Signature

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

(GENERAL)



S/N 10/612,711

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Yuegang Zhang et al.	Examiner:	Unknown
Serial No.:	10/612,711	Group Art Unit:	3743
Filed:	June 30, 2003	Docket:	884.885US1
Title:	THERMAL INTERFACE APPARATUS, SYSTEMS, AND METHODS		
Assignee:	Intel Corporation	Customer No.:	21186

COMMUNICATION CONCERNING RELATED APPLICATION(S)

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Applicants would like to bring to the Examiner's attention the following related application(s) in the above-identified patent application:

<u>Serial/Patent No.</u>	<u>Filing Date</u>	<u>Attorney Docket</u>	<u>Title</u>
10/170313	June 12, 2002	884.564US1	INCREASING THERMAL CONDUCTIVITY OF THERMAL INTERFACE USING CARBON NANOTUBES AND CVD
10/024057	December 17, 2001	884.569US1	METHOD AND APPARATUS FOR PRODUCING ALIGNED CARBON NANOTUBE THERMAL INTERFACE STRUCTURE
10/738637	December 16, 2003	884.564US2	INCREASING THERMAL CONDUCTIVITY OF THERMAL INTERFACE USING CARBON NANOTUBES AND CVD
10/357927	February 3, 2003	Intel P15673	PACKAGING OF INTEGRATED CIRCUITS WITH CARBON NANO- TUBE ARRAYS TO ENHANCE HEAT DISSIPATION THROUGH A THERMAL INTERFACE

COMMUNICATION CONCERNING RELATED APPLICATIONS

Serial Number: 10/612,711

Filing Date: June 30, 2003

Title: THERMAL INTERFACE APPARATUS, SYSTEMS, AND METHODS

Assignee: Intel Corporation

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Dkt: 884.885US1 (INTEL)

Respectfully submitted,

YUEGANG ZHANG ET AL.

By Applicants' Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

Attorneys for Intel Corporation

P.O. Box 2938

Minneapolis, MN 55402

(612) 373-6970

Date

September 1, 2004

By

Charles E. Steffey

Charles E. Steffey

Reg. No. 25,179

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 1 day of September, 2004.

Name

KACIA LEE

Signature

Kacia Lee

S/N 10/612,711

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Yuegang Zhang et al.

Examiner: Unknown

Serial No.: 10/612,711

Group Art Unit: 3743

Filed: June 30, 2003

Docket: 884.885US1

Title: THERMAL INTERFACE APPARATUS, SYSTEMS, AND METHODS

Assignee: Intel Corporation

Customer No: 21186

INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicants respectfully request that this Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicants request that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicants with the next official communication.

Pursuant to 37 C.F.R. §1.97(b), it is believed that no fee or statement is required with the Information Disclosure Statement. However, if an Office Action on the merits has been mailed, the Commissioner is hereby authorized to charge the required fees to Deposit Account No. 19-0743 in order to have this Information Disclosure Statement considered.

INFORMATION DISCLOSURE STATEMENT

Serial No : 10/612,711

Filing Date: June 30, 2003

Title: THERMAL INTERFACE APPARATUS, SYSTEMS, AND METHODS

Assignee: Intel Corporation

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Dkt: 884.885US1 (INTEL)

The Examiner is invited to contact the Applicants' Representative at the below-listed telephone number if there are any questions regarding this communication.

Respectfully submitted,

YUEGANG ZHANG ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
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P.O. Box 2938
Minneapolis, Minnesota 55402
(612) 373-6970

Date

September 1, 2004

By

Charles E. Steffey
Charles E. Steffey
Reg. No. 25,179

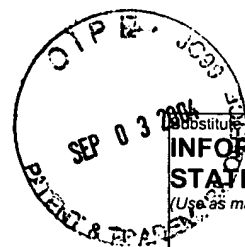
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Name

KACIA LEE

Signature

Kacia Lee



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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

Application Number	10/612,711
Filing Date	June 30, 2003
First Named Inventor	Zhang, Yuegang
Group Art Unit	3743
Examiner Name	Unknown

Sheet 1 of 1

Attorney Docket No: 884.885US1

US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date If Appropriate
	US-2003/0117770	06/26/2003	Montgomery, Stephen W.	361	687	12/20/2001
	US-5,102,824	04/07/1992	Neugebauer, C. F., et al.	438	28	11/05/1990
	US-5,316,080	05/31/1994	Banks, Bruce A., et al.	165	185	02/10/1993
	US-5,604,037	02/18/1997	Ting, Jyh-Ming, et al.	428	408	11/01/1994
	US-5,825,624	10/20/1998	Arnold, Judson V., et al.	361	708	02/05/1997
	US-5,837,081	11/17/1998	Ting, Jyh-Ming, et al.	156	89.26	03/13/1996
	US-5,965,267	10/12/1999	Nolan, Peter E., et al.	428	408	03/31/1998
	US-5,972,265	10/26/1999	Marra, A. A., et al.	264	112	05/21/1998
	US-6,312,303	11/06/2001	Yaniv, Zvi, et al.	445	24	07/19/1999
	US-6,407,922	06/18/2002	Eckblad, M. Z., et al.	361	704	09/29/2000
	US-6,630,772	10/07/2003	Bower, Christopher A., et al.	313	311	04/22/1999

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	T ²
	EP-0538798	04/28/1993	Iguchi, T., et al.	H01L	23/373	
	EP-0689244	12/27/1995	Anthony, T. R.	H01L	23/373	
	EP-1054036	11/22/2000	Dupire, M., et al.	C08K	7/24	
	EP-1109218	06/20/2001	Tobita, M., et al.	H01L	23/373	
	WO-00/33628	06/08/2000	Brownell, M. P.	H05K	7/20	
	WO-01/30694	05/03/2001	Smalley, R. E., et al.	C01B	31/02	
	WO-01/92381	12/06/2001	Barrera, E. V., et al.	C08J	5/04	

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		ANDREWS, R., et al., "Nanotube Composite Carbon Fibers", <u>Applied Physics Letters</u> , 75(9), (August 30, 1999), 1329-1331	
		BELLAR, R J., et al., "High Conduction Thermal Interface Material", <u>IBM Technical Disclosure Bulletin</u> , 36 (10), (October 1, 1993), 581-583	
		ZHANG, Y., et al., "Formation of metal nanowires on suspended single-walled carbon nanotubes", <u>Applied Physics Letters</u> , 77(19), (November 6, 2000), 3015-3017	

EXAMINER

DATE CONSIDERED

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. † Applicant's unique citation designation number (optional) ‡ Applicant is to place a check mark here if English language Translation is attached